

# Notice of Allowability

Application No.

09/816,832

Examiner

david shay

Applicant(s)

MUELLER ET AL.

Art Unit

3735

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment after final of March 20, 2006.
2. ☒ The allowed claim(s) is/are 11, 12, 14, and 15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

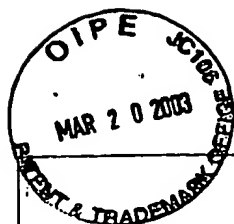
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

DAVID M. SHAY  
PRIMARY EXAMINER  
GROUP 330



EXPRESS MAIL NO.: EL 501 759 547 US

## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY DOCKET NO.

10177-141-999

APPLICATION NO

09/816,832

APPLICANT

Mueller et al.

FILING DATE

March 22, 2001

GROUP

3739

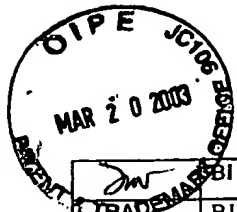
## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
dmr	AA	3,773,034	11/20/73	Burns <i>et al.</i>			
dmr	AB	3,952,742	04/27/76	Taylor			
dmr	AC	4,296,100	10/20/81	Franco			
dmr	AD	4,531,936	07/30/85	Gordon			
dmr	AE	4,657,536	04/14/87	Dorman			
dmr	AF	4,770,653	09/13/88	Shturman			
dmr	AG	4,911,148	03/27/90	Sosnowski <i>et al.</i>			
dmr	AH	4,946,442	08/07/90	Sanagi			
dmr	AI	4,994,033	02/19/91	Shockey <i>et al.</i>			
dmr	AJ	5,061,223	10/29/91	Yock			
dmr	AK	5,185,004	02/09/93	Lashinski			
dmr	AL	5,203,772	04/20/93	Hammerslag <i>et al.</i>			
dmr	AM	5,244,460	09/14/93	Unger <i>et al.</i>			
dmr	AN	5,385,148	01/31/95	Lesh <i>et al.</i>			
dmr	AO	5,419,777	05/30/95	Hofling			
dmr	AP	5,489,575	02/06/96	Lee <i>et al.</i>			
dmr	AQ	5,499,971	03/19/96	Shapland <i>et al.</i>			
dmr	AR	5,507,724	04/16/96	Hofmann <i>et al.</i>			
dmr	AS	5,569,160	10/29/96	Sauer <i>et al.</i>			
dmr	AT	5,569,217	10/29/96	Luther			
dmr	AU	5,571,215	11/05/96	Sterman <i>et al.</i>			
dmr	AV	5,591,195	01/07/97	Taheri <i>et al.</i>			
dmr	AW	5,653,684	08/05/97	Laptewicz <i>et al.</i>			
dmr	AX	5,661,133; B1 5,661,133	08/26/97; 06/01/99	Leiden <i>et al.</i>			
dmr	AY	5,662,124	09/02/97	Wilk			
dmr	AZ	5,693,029	12/02/97	Leonhardt			
dmr	BA	5,698,531	12/16/97	Nabel <i>et al.</i>			
dmr	BB	5,733,250		Withdrawn			
dmr	BC	5,733,280	03/31/98	Avitall			
dmr	BD	5,797,870	08/25/98	March <i>et al.</i>			
dmr	BE	5,797,960	08/25/98	Stevens <i>et al.</i>			
dmr	BF	5,820,592	10/13/98	Hammerslag			
dmr	BG	5,827,216	10/27/98	Igo <i>et al.</i>			
dmr	BH	5,830,993	11/03/98	Blecha <i>et al.</i>			

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MAR 25 2003

TECHNOLOGY CENTER R3700



EXPRESS MAIL NO.: EL 501 759 547 US

<i>dm</i>	BI	5,833,658	11/10/98	Levy <i>et al.</i>		
<i>dm</i>	BJ	5,840,031	11/24/98	Crowley		
<i>dm</i>	BK	5,840,059	11/24/98	March <i>et al.</i>		
<i>dm</i>	BL	5,840,062	11/24/98	Gumaste <i>et al.</i>		
<i>dm</i>	BM	5,843,050	12/01/98	Jones <i>et al.</i>		
<i>dm</i>	BN	5,846,221	12/08/98	Snoke <i>et al.</i>		
<i>dm</i>	BO	5,857,464	01/12/99	Desai		
<i>dm</i>	BP	5,860,953	01/19/99	Snoke <i>et al.</i>		
<i>dm</i>	BQ	5,871,495	02/16/99	Mueller		
<i>dm</i>	BR	5,876,373	03/02/99	Giba <i>et al.</i>		
<i>dm</i>	BS	5,882,332	03/16/99	Wijay		
<i>dm</i>	BT	5,885,272	03/23/99	Aita <i>et al.</i>		
<i>dm</i>	BU	5,891,133	04/06/99	Murphy-Chutorian		
<i>dm</i>	BV	5,931,831	08/03/99	Linder		
<i>dm</i>	BW	5,935,063	08/10/99	Nguyen		
<i>dm</i>	BX	5,941,845	08/24/99	Tu <i>et al.</i>		
<i>dm</i>	BY	5,941,868	08/24/99	Kaplan <i>et al.</i>		
<i>dm</i>	BZ	5,964,754	10/12/99	Osypka		
<i>dm</i>	CA	5,971,983	10/26/99	Lesh		
<i>dm</i>	CB	5,993,443	11/30/99	Murphy-Chutorian <i>et al.</i>		
<i>dm</i>	CC	5,997,525	12/07/99	March <i>et al.</i>		
<i>dm</i>	CD	6,004,269	12/21/99	Crowley <i>et al.</i>		
<i>dm</i>	CE	6,012,457	01/11/00	Lesh		
<i>dm</i>	CF	6,024,703	02/15/00	Zanelli <i>et al.</i>		
<i>dm</i>	CG	6,063,022	05/16/00	Ben-Haim		
<i>dm</i>	CH	6,133,233	10/17/00	Ross <i>et al.</i>		
<i>dm</i>	CI	6,183,444	02/06/01	Glines <i>et al.</i>		
<i>dm</i>	CJ	6,161,543	12/19/00	Cox <i>et al.</i>		
<i>dm</i>	CK	6,171,303	01/09/01	Ben-Haim <i>et al.</i>		
<i>dm</i>	CL	6,179,809	01/30/01	Khairkahan <i>et al.</i>		
<i>dm</i>	CM	6,224,584 B1	05/01/01	March <i>et al.</i>		
<i>dm</i>	CN	6,237,605 B1	05/29/01	Vaska <i>et al.</i>		
<i>dm</i>	CO	6,309,375	10/30/01	Glines <i>et al.</i>		
<i>dm</i>	CP	6,314,962 B1	11/13/01	Vaska <i>et al.</i>		
<i>dm</i>	CQ	6,314,963 B1	11/13/01	Vaska <i>et al.</i>		

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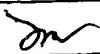
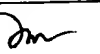

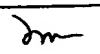
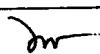
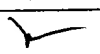
MAR 25 2003

TECHNOLOGY CENTER R3700

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
<i>dm</i>	CR	WO 96/32129	10/17/96	PCT			<input type="checkbox"/>	<input type="checkbox"/>
<i>dm</i>	CS	WO 97/25101	07/17/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>
<i>dm</i>	CT	WO 97/47253	12/18/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>
<i>dm</i>	CU	WO 99/39624	08/12/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
<i>dm</i>	CV	WO 00/57895	10/05/00	PCT			<input type="checkbox"/>	<input type="checkbox"/>

EXPRESS MAIL NO.: EL 501 759 547 US**OTHER REFERENCES** (Including Author, Title, Date, Pertinent Pages, Etc.)

	CW	Padua <i>et al.</i> , "Basic fibroblast growth factor is cardioprotective in ischemia-reperfusion injury" <i>Molecular and Cellular Biochemistry</i> <b>143</b> : 129-135 (1995)
	CX	Shi <i>et al.</i> , "PR-39, a proline-rich antibacterial peptide that inhibits phagocyte NADPH oxidase activity by binding to Src homology 3 domains of p47phox" <i>Proc. Natl. Acad. Sci.</i> <b>93</b> :6014-6018 (1996)
	CY	Uchida <i>et al.</i> , "Angiogenic therapy of acute myocardial infarction by intrapericardial injection of basic fibroblast growth factor and heparin sulfate: An experimental study" <i>Am. Heart J.</i> , <b>130</b> :1182-1188 (1995)
	CZ	Unger <i>et al.</i> , "Basic fibroblast growth factor enhances myocardial collateral flow in a canine model" <i>Am J. Physiol.</i> , <b>266</b> :H1577-H1595 (1994)
	DA	Walterberger <i>et al.</i> , "Ischemia-Induced Transplant Arteriosclerosis in the Rat" <i>Arteriosclerosis, Thrombosis and Vascular Biology</i> <b>16</b> (12):1516-1523 (1996)
	DB	Xiaobing, <i>et al.</i> , "Ischemia and Reperfusion reduce the Endogenous Basic Fibroblast Growth Factor (bf GF) in Rat Skeletal Muscles" <i>Chinese Medical Journal</i> <b>108</b> (9): 699-703, (1995)

EXAMINER 

DATE CONSIDERED

*April 11, 2006*

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

20583 7590 04/12/2006  
JONES DAY  
222 EAST 41ST ST  
NEW YORK, NY 10017



EXAMINER	
SHAY, DAVID M	
ART UNIT	PAPER NUMBER
3735	
DATE MAILED: 04/12/2006	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,832	03/22/2001	Richard L. Mueller	5756-0012.30	6135

TITLE OF INVENTION: PHOTOATHEROLYTIC CATHETER APPARATUS AND METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	07/12/2006

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

20583 7590 04/12/2006

JONES DAY  
222 EAST 41ST ST  
NEW YORK, NY 10017

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,832	03/22/2001	Richard L. Mueller	5756-0012.30	6135

TITLE OF INVENTION: PHOTOATHEROLYTIC CATHETER APPARATUS AND METHOD

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	07/12/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAY, DAVID M	3735	606-010000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,832	03/22/2001	Richard L. Mueller	5756-0012.30	6135
20583	7590	04/12/2006	EXAMINER	
JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			SHAY, DAVID M	
			ART UNIT	PAPER NUMBER
			3735	
DATE MAILED: 04/12/2006				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 66 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 66 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

P.O. BOX 1450

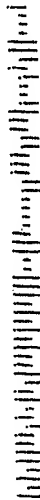
ALEXANDRIA, VA 22313-1450

IF UNDELIVERABLE RETURN IN TEN DAYS

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